



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,644	10/15/2003	Jochen Koetke	GMH/411/US	4993
2543	7590	05/19/2006	EXAMINER	
ALIX YALE & RISTAS LLP 750 MAIN STREET SUITE 1400 HARTFORD, CT 06103				LAVARIAS, ARNEL C
		ART UNIT		PAPER NUMBER
		2872		

DATE MAILED: 05/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/685,644	KOETKE, JOCHEN
	Examiner	Art Unit
	Arnel C. Lavaras	2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 2/28/06, 3/16/06.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-6 and 8-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-6 and 8-21 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 2/28/06 is/are: a) accepted or b) objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

 1. Certified copies of the priority documents have been received.

 2. Certified copies of the priority documents have been received in Application No. _____.

 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Drawings

1. The replacement drawings were received on 2/28/06. These drawings are acceptable.

Response to Amendment

2. The amendments to the specification in the submission dated 2/28/06 are acknowledged and accepted. In view of these amendments, the objections to the specification in Section 8 of the Office Action dated 11/23/05 are respectfully withdrawn.
3. The amendments to Claims 1, 3-6, 15-20 in the submission dated 2/28/06 are acknowledged and accepted.
4. The cancellation of Claim 7 in the submission dated 2/28/06 is acknowledged and accepted.
5. In view of the amendments made to the claims above, the objections to the claims in Section 9 of the Office Action dated 11/23/05 are respectfully withdrawn.
6. The addition of Claim 21 in the submission dated 3/16/06 is acknowledged and accepted.

Response to Arguments

7. The Applicant's arguments filed 2/28/06 have been fully considered but they are not found fully persuasive.

Art Unit: 2872

8. In the reply filed 2/28/06, the Applicant argues that, with respect to newly amended Claim 1, as well as Claims 2-20 which depend on Claim 1, Penney et al. fails to teach or reasonably suggest the diaphragm being rotatable about an axis parallel to the optical axis of the illuminating beam path whereby the at least one slit is rotatable from a first orientation within the beam path to a second orientation with the beam path. The Examiner notes that Penney et al. additionally discloses a second embodiment (See specifically Figures 4-5) which discloses a diaphragm (See 132 in Figure 4) being rotatable about an axis parallel to the optical axis of the illuminating beam path whereby the at least one pinhole is rotatable from a first orientation within the beam path to a second orientation with the beam path (See specifically Figure 8; col. 18, lines 12-28). It is noted that as the pinhole is rotated, the pinhole specifically changes positional orientation within the cross-section of the beam (See 132, 134 specifically in Figure 6). However, since Penney et al. does not explicitly disclose the diaphragm defining at least one substantially rectangular slit, the Examiner respectfully withdraws the rejections in Sections 11, 13-17 of the Office Action dated 11/23/05.

9. Additionally, in the reply filed 2/28/06, the Applicant argues that, with respect to newly amended Claim 1, as well as Claims 2-20 which depend on Claim 1, Sigelman fails to teach or reasonably suggest the diaphragm being rotatable about an axis parallel to the optical axis of the illuminating beam path whereby the at least one slit is rotatable from a first orientation within the beam path to a second orientation with the beam path. The Examiner respectfully disagrees. The Examiner notes that in the process of rotating the diaphragm of Sigelman (See for example 233, 234 in Figures 9-10) during the use of

the device (e.g. while using the device, the operator decides to change slits (e.g. 251, 252, 253, 254 in Figure 10b) or remove the slit entirely (e.g. 250 in Figure 10b)), a particular slit attains multiple orientations within the cross-section of the beam as the slit is moved into or out of the beam path.

10. The Applicant's arguments filed 3/16/06 have been fully considered but they are not persuasive.
11. In the reply filed 3/16/06, the Applicant argues that, with respect to newly amended Claim 1, as well as Claims 2-20 which depend on Claim 1, neither Penney et al. nor Sigelman are properly analogous art with respect to the operation microscope of the instant application. The Examiner respectfully disagrees. In particular, the Applicant is reminded that preambular phrases, unless structurally distinguishable from prior art, are normally not given significant patentable weight. In the instant case, both Penney et al. and Sigelman meet all of the positively recited structural limitations (except for Penney et al., which does not explicitly disclose the diaphragm defining at least one substantially rectangular slit), and hence, also support the title "operation microscope" in the same manner as the structure of the claim.
12. The Examiner notes that the Official Notice taken in Section 14 of the Office Action dated 11/23/05 has been taken to be admitted prior art since Applicant failed to seasonably traverse the assertion of Official Notice (See MPEP 2144.03).
13. Claims 1-6, 8-21 are now rejected as follows.

Claim Objections

14. Claims 1-6, 8-21 are objected to because of the following informalities:

Claim 1, line 6- 'lest' should read 'least'. Claims 2-6, 8-21 are dependent on Claim 1, and hence inherit the deficiencies of Claim 1.

Regarding Claim 14, the phrase 'can be' renders the claim uncertain in scope because it is unclear whether the limitation(s) following the phrase are part of the claimed invention.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 1-2, 4-5, 8-13, 16, 18, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sigelman (U.S. Patent No. 4671631), of record.

Sigelman discloses an operation microscope (See for example Figures 1, 4, 9, 10) with an illumination device (See for example 102 in Figure 9) which is arranged behind a front lens (See for example 14, 64 in Figure 1) and illuminates an object plane (See col. 6, line 43-col. 7, line 20) with a light patch (See 233, 234 in Figure 10a-b which provide the final light patch shape used to illuminate the patient's eye) and in whose beam path a diaphragm (See for example 240, 241, 242 in Figure 10a; 250, 251, 252, 253, 254 in Figure 10b) is arranged which partially covers the beam path, the diaphragm defining at

least one substantially rectangular slit disposed in the beam path (See for example 251, 252, 253, 254 in Figure 10b), the beam path having an optical axis, wherein the light patch is movable with a translatory movement component in the object plane (See col. 5, lines 10-25; See also 86, 94 in Figures 1, 4; col. 5, lines 31-64). Sigelman additionally discloses the diaphragm being designed for a movement with a translatory component in the beam path perpendicular to the optical axis of the illuminating beam path (See Figures 9-10; See col. 5, lines 10-25); the light patch is movable by pivoting a deflection element for the illuminating light (See 86, 90, 94 in Figures 1, 4); the diaphragm is arranged in a diaphragm support which is movable perpendicular to the optical axis of the illuminating path (See 240, 241, 242 in Figure 10a; 250, 251, 252, 253, 254 in Figure 10b); the diaphragm may be rotated about an axis parallel to the optical axis of the illuminating beam path (See 233, 234 in Figures 9-10) whereby at least one slit is rotatable from a first orientation within the beam path to a second orientation within the beam path (It is noted that in the process of rotating the diaphragm during the use of the device (e.g. while using the device, the operator decides to change slits (e.g. 251, 252, 253, 254 in Figure 10b) or remove the slit entirely (e.g. 250 in Figure 10b)), a particular slit attains multiple orientations within the cross-section of the beam as the slit is moved into or out of the beam path.); the diaphragm is arranged in a diaphragm support which is rotatably mounted eccentrically with respect to the optical axis of the illuminating beam path (See 233, 234 in Figures 9-10); more than one diaphragm may be provided on the diaphragm support (See 240, 241, 242 in Figure 10a; 250, 251, 252, 253, 254 in Figure 10b); the diaphragm or at least one diaphragm is slit-shaped or circular (See 240, 241,

242 in Figure 10a; 250, 251, 252, 253, 254 in Figure 10b); the diaphragm has a modifiable slit width size (See 250, 251, 252, 253, 254 in Figure 10b); and the diaphragms are arranged on a diaphragm support which is partially transmitting at least in subareas (See 240, 241, 242 in Figure 10a; col. 5, lines 10-25).

17. Claims 1, 8, 11, 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Abe (JP 57115516A).

Abe discloses an operation microscope (See for example Figures 4-7) with an illumination device (See for example 22 in Figures 4-7) which is arranged behind a front lens (See for example 11-12 in Figures 4-7) and illuminates an object plane (See for example 10 in Figures 4-7) with a light patch (See Figure 2) and in whose beam path a diaphragm (See for example 15 in Figures 4-5; 15a in Figures 6-7) is arranged which partially covers the beam path, the diaphragm defining at least one substantially rectangular slit disposed in the beam path (See for example 20 in Figures 4-5; 20a in Figures 6-7), the beam path having an optical axis, the diaphragm (See 15 in Figures 4-5; 15a in Figures 6-7) being rotatable about an axis parallel to the optical axis of the illuminating beam path whereby the at least one slit is rotatable from a first orientation with the beam path to a second orientation within the beam path (See specifically Figures 4-7; It is noted that as the slits are rotated, the slits specifically change positional orientation within the cross-section of the beam, wherein the light patch is moved with a translatory movement component in the object). Abe additionally discloses the diaphragm being arranged in a diaphragm support which is rotatably mounted eccentrically with respect to the optical axis of the illuminating beam path (See

specifically Figures 6-7); the diaphragm or at least one diaphragm is circular (See specifically Figures 4-7); the diaphragm is arranged on a diaphragm support which is partially transmitting at least in subareas (See 15, 20 in Figures 4-5; 15a, 20a in Figures 6-7); and the diaphragm is adjusted by a motor (See 19 in Figures 4-5).

18. Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Snook (U.S. Patent No. 5512965).

Snook discloses an operation microscope (See for example Figures 2-7) including an illuminating device (See for example 20, 38 in Figure 6) which is arranged behind a front lens (See for example 24 in Figure 6) and illuminates an object plane (See for example 28 in Figure 7) with a light patch and in whose beam path a diaphragm (See 40 in Figure 4) is arranged which partially covers the beam path, the diaphragm defining at least one substantially rectangular slit (See 26 in Figure 4) disposed in the beam path, the beam path having an optical axis, the diaphragm being arranged in a diaphragm support which is movable perpendicular to the optical axis of the illuminating beam path (See Figures 4, 6, 7) wherein the light patch is movable with a translatory movement component in the object plane (See 36 in Figure 4; col. 16, lines 12-22).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 1-3, 5-6, 8-9, 11, 15, 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penney et al. (U.S. Patent No. 5258791), of record, in view of Sigelman.

Penney et al. discloses an operation microscope (See for example Figures 1-2, 4-6) with an illumination device (See for example 112 in Figure 4) which is arranged behind a front lens (See for example 114 in Figure 4) and illuminates an object plane (See for example 148 in Figure 4) with a light patch (See Figure 8) and in whose beam path a diaphragm (See for example 132, 134 in Figure 4) is arranged which partially covers the beam path, the diaphragm defining at least one hole disposed in the beam path (See for example 134 in Figure 4) and the beam path has an optical axis, the diaphragm (See 132 in Figure 4) being rotatable about an axis parallel to the optical axis of the illuminating beam path whereby the at least one pinhole is rotatable from a first orientation with the beam path to a second orientation within the beam path (See specifically Figure 8; col. 18, lines 12-28; It is noted that as the pinhole is rotated, the pinhole specifically changes positional orientation within the cross-section of the beam (See 132, 134 specifically in Figure 6)), wherein the light patch is moved with a translatory movement component in the object plane (See col. 9, line 1-col. 14, line 4; See also Figure 8; col. 18, lines 12-28). Penney et al. additionally discloses the diaphragm being designed for a movement with a translatory component in the beam path perpendicular to the optical axis of the illuminating beam path (See for example 36, 32, 34 in Figure 1; col. 9, line 1-col. 14, line 4); the illuminating device is movable relative to the diaphragm (See for example 22, 12 in Figure 1; col. 9, line 1-col. 14, line 4); the diaphragm is arranged in a diaphragm

support which is movable perpendicular to the optical axis of the illuminating path (See for example 32 in Figure 1; col. 9, line 1-col. 14, line 4); more than one diaphragm may be provided on the diaphragm support (See for example 132, 134 in Figure 4); the diaphragm or at least one diaphragm is circular (See for example 34 in Figure 1; 134 in Figure 4); the diaphragm is movable in two directions perpendicular to one another and linearly perpendicular to the optical axis of the illuminating beam path (See for example 36 in Figure 1; col. 9, line 1-col. 14, line 4); and the diaphragm is arranged in a diaphragm support which is rotatably mounted eccentrically with respect to the optical axis of the illuminating beam path (See for example 132 in Figure 4). Penney et al. lacks the at least one pinhole being at least one substantially rectangular slit. However, Sigelman teaches a conventional illumination system for use in an ophthalmoscope (See for example 14 in Figures 1, 3, 9). In particular, Sigelman teaches that the illumination system may include a diaphragm to delimit the cross section of the incident beam (See for example 233, 234 in Figures 9, 10a, 10b), wherein the diaphragm may include rectangular shaped slits or round holes (See 250, 251, 252, 253, 254 in Figure 10b). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the at least one pinhole in the diaphragm of the operation microscope of Penney et al., be at least one substantially rectangular slit, as taught by Sigelman, for the purpose of providing appropriate cross-sectional shape for the incident illumination beam, particularly where a strip shape cross-section is advantageous for examination of various structures of the eye, while allowing for efficient blocking and intensity adjustment of the incident light.

21. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Penney et al. in view of Sigelman.

Penney et al. Sigelman discloses the invention as set forth above in Claim 1, but does not explicitly disclose the diaphragm having a modifiable slit width size or a modifiable circle diameter size. However, Penney et al. additionally teaches that the size of the aperture controls the size of the portion of the cornea which constitutes the measurement point, and that it is advantageous to utilize a smaller diameter aperture to prevent interference from the pupil of the eye, as well as block out unnecessary light from striking the cornea outside the measurement point (See col. 10, line 58-col. 11, line 25; col. 12, lines 48-57). Thus, one of ordinary skill in the art would have found it obvious to have the aperture include some means for adjusting its diameter, instead of utilizing a fixed-diameter aperture. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the diaphragm of the operation microscope of Penney et al. in view of Sigelman, have a modifiable slit width size of a modifiable circle diameter size, for the purpose of optimizing the measurement point, while preventing interference from unwanted stray light.

22. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Penney et al. in view of Sigelman.

Penney et al. in view of Sigelman discloses the invention as set forth above in Claim 1, except for the diaphragm and/or deflection element being adjusted by motor. However, Penney et al. additionally discloses that the diaphragm position may be adjusted via a system controller (See for example 80 in Figure 1) connected to a position

drive system, such as an X-Y stage (See for example 36 in Figure 1). It is well known in the art that such conventional X-Y stages utilize motors to provide the movement needed for the stages. Official notice is taken. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the diaphragm and/or deflection element of the operation microscope of Penney et al. in view of Sigelman, be adjusted by motor, to provide fast, automated movement of the stage without user intervention.

23. Claims 4, 16-17, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Penney et al. in view of Sigelman.

Penney et al. in view of Sigelman discloses the invention as set forth above in Claims 1-3, but does not explicitly disclose the light patch being movable by pivoting of a deflection element for the illuminating light. However, Penney et al. additionally discloses (See col. 10, lines 32-57) that the light source, as an alternative to directly moving the light source (See 12 in Figure 1) itself, may be fixed in position, and the light emitted from the source is reflected by a galvanometer mounted mirror whose orientation is controlled by the control system (See 80 in Figure 1), which provides a similar effect to moving the source with an X-Y stage. It is noted that such galvanometer mounted mirrors typically pivot about an axis, and that by moving the beam using such a mirror, the light patch will necessarily move. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the light patch in the operation microscope of Penney et al. in view of Sigelman, be movable by pivoting of a

deflection element for the illuminating light, to allow for extremely fast, repetitive, and repeatable movement and scanning of the light beam from the light source.

24. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Penney et al. in view of Sigelman.

Penney et al. in view of Sigelman discloses the invention as set forth above in Claims 1, 5, except for the diaphragm or at least one diaphragm being slit-shaped. However, slit-shaped diaphragms are well known in the art. For example, Sigelman additionally teaches a conventional binocular ophthalmoscope (See for example Figures 1, 9), which includes a light source assembly (See Figure 9). In particular, the light source assembly includes a selector including two aperture disks (See 230 in Figures 1, 9, Figure 10a, b), the aperture disks including circular- and slit-shaped apertures. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the diaphragm of the operation microscope of Penney et al. in view of Sigelman, further be slit-shaped, as further taught by Sigelman, for the purpose of providing a light patch shape appropriate for the intended application, while allowing for efficient blocking and intensity adjustment of the incident light.

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 571-272-2315. The examiner can normally be reached on M-F 9:30 AM - 6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Arnel C. Lavaras
Patent Examiner
Group Art Unit 2872
5/15/06

Replacement Sheet

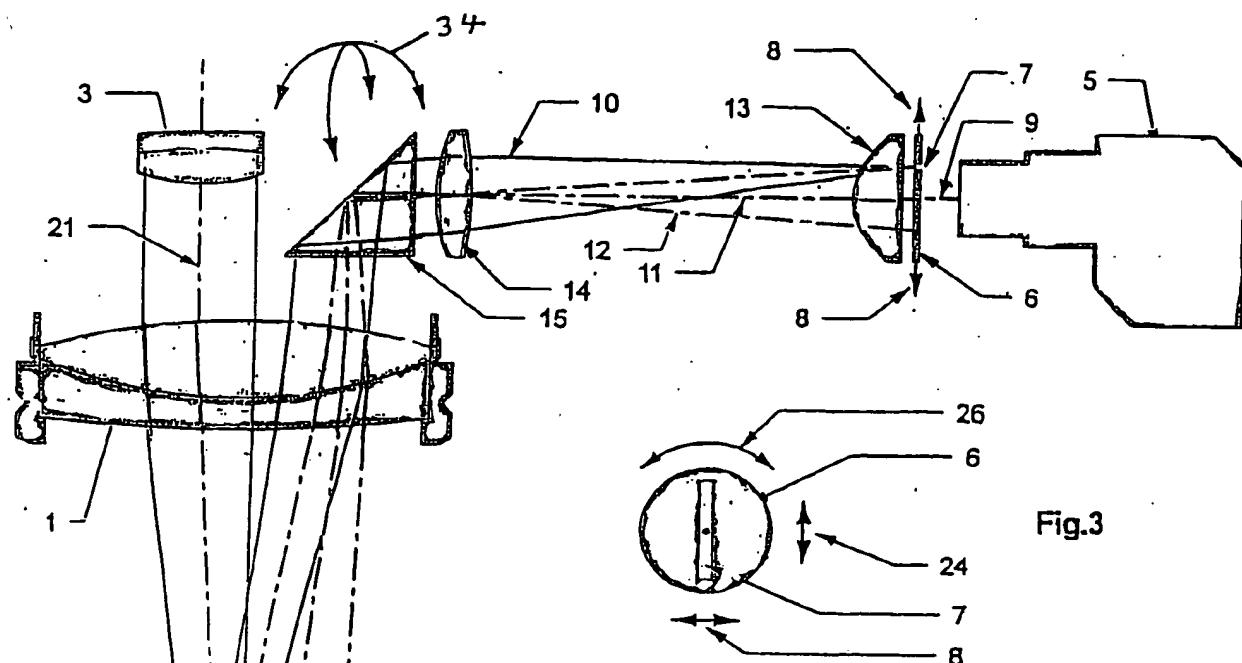


Fig.3

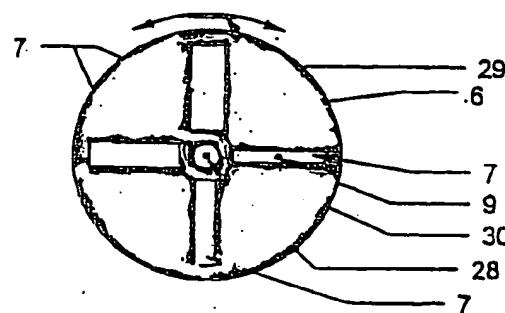


Fig.4

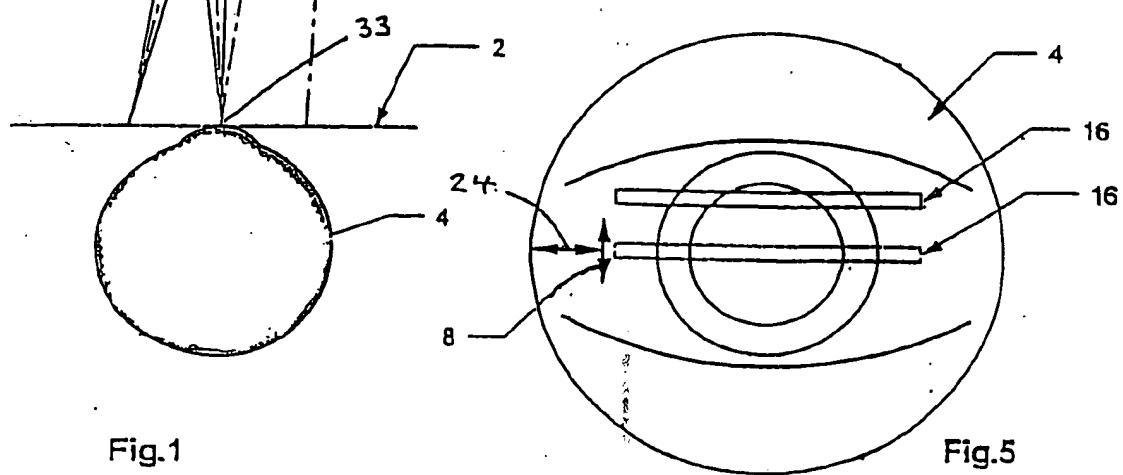


Fig.1

Fig.5

Drawing Changes
Approved
for
sistema

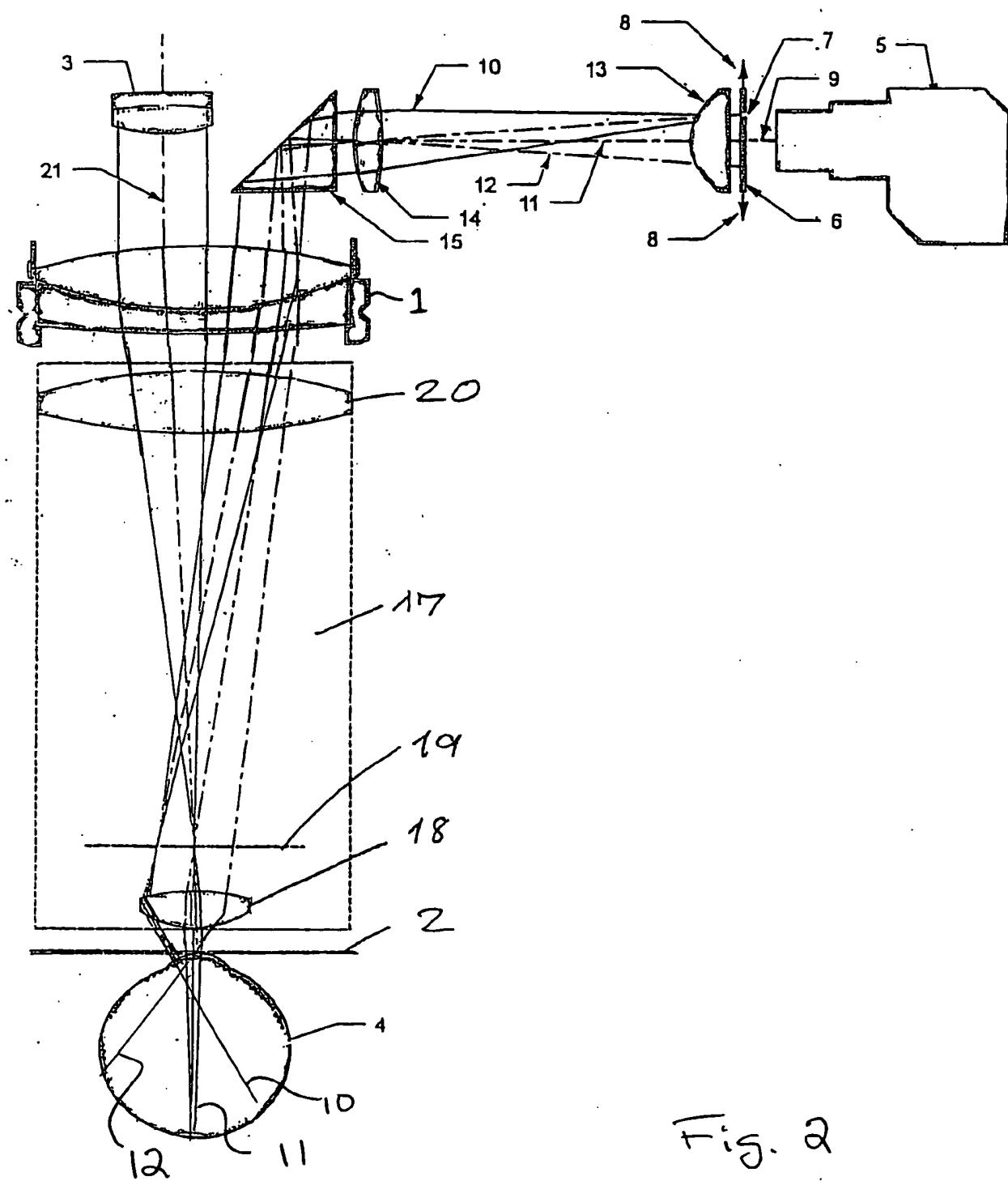


Fig. 2

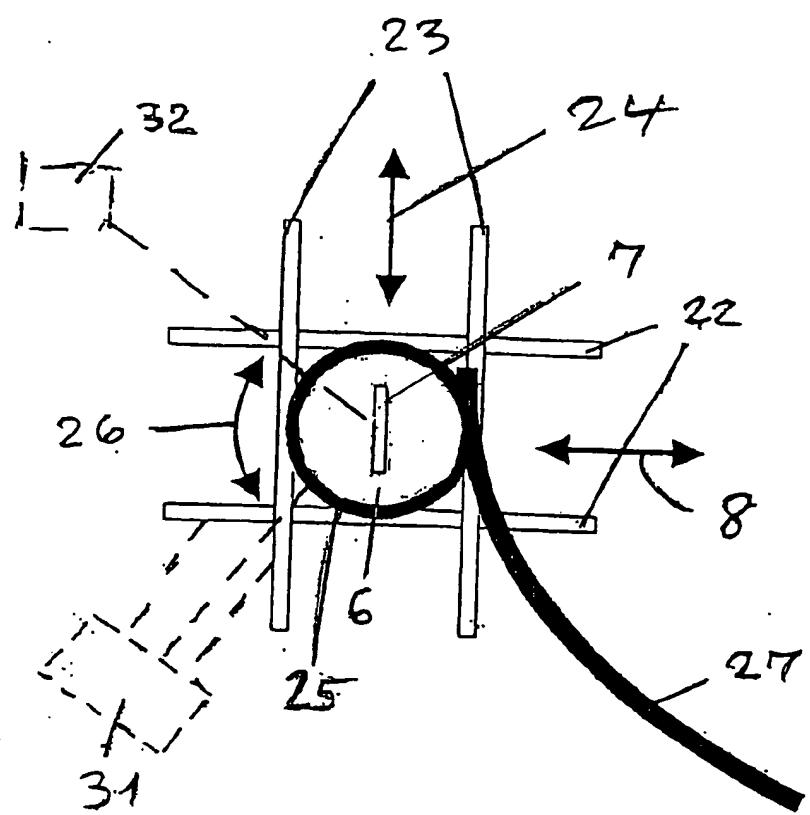


Fig 6